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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/678,168	10/02/2000	Robert Alan Cochran	10992806-1	4123

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EXAMINER	
ROBINSON BOYCE, AKIBA K	

ART UNIT	PAPER NUMBER
3623	

DATE MAILED: 02/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/678,168	COCHRAN, ROBERT ALAN	
	Examiner	Art Unit	
	Akiba K Robinson-Boyce	3623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *06 December 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3-8,10 and 12-17* is/are rejected.

7)☒ Claim(s) *2,9,11 and 18-20* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Status of Claims

1. Due to the appeal brief filed 12/6/04, the following is a non-final office action. Claim 6 has been amended. Claims 1-20 are pending in this application and have been examined on the merits. Prosecution for this case has been re-opened. The previous office action has been withdrawn, and Claims 1-20 are rejected as follows.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In this case, the term "pricing tier" in claim 1 is a relative term that renders the claims indefinite. The term "pricing tier" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. In addition, once this "pricing tier" is established, it is not utilized in any way to process the service requests. This "pricing tier" is therefore irrelevant. Because this term "pricing tier" is used, the direction of the claim, and the scope of the invention is unclear.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1, 3, 4-6, 10, and 12-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Freeland et al (US 4,262,331), and further in view of Kilkki et al (US 6,011,778).

As per claims 1, 10, 15, Freeland et al discloses:

establishing a maximum rate of request servicing/a memory that contains an established maximum rate of request servicing, (Col. 4, lines 31-33, using the maximum number of elemental tasks at the present enablement time to determine the task control word that corresponds to increasingly time consumptive processing),

and an expected time for serving a request at the maximum rate of request servicing, (Col. 8, lines 35-38, expected interval),

for each request generating device...maintaining an instantaneous rate of request servicing by the request servicing device/for each request generating device...an instantaneous rate of request servicing by the request servicing device; (Col. 8, lines 30-33, sequentially polled service periods);

following servicing of each request from a request generating device by the request servicing device, determining a time elapsed during servicing of the requests/control functionality that services electronic requests received from the request generating devices and that, following servicing of each request from a request

generating device by the request servicing device, determines a time elapsed during servicing of the request, (Col. 8, lines 39-41, time of commencement o the last service),

when the time elapsed during servicing of the request is less than the expected time for serving a request established for the request generating device,

calculating a remaining time equal to the difference between expected time for serving a request established for the request generating device and the time elapsed during servicing of the request,/so that, when the time elapsed during servicing of the request is less than the expected time for serving a request established for the request generating device, the control functionality calculates a remaining time equal to the difference between expected time for serving a request established for the request generating device, (col. 8, lines 46-53, comparing the difference between the time of commencement of the last service period with the expected intervals).

waiting for a length of time based on the calculated remaining time prior to servicing another request for the request generating device/ and the time elapsed during servicing of the request and waits for a length of time based on the calculated remaining time prior to servicing another request for the request generating device, (Col. 8, lines 61-67, regulating processing overload conditions based on comparison, also shows that in this case, the commencement of the last service period is less than the expected time).

Freeland et al fails to disclose establishing a pricing tier for each request generating device, but does disclose a request servicing device in the abstract, lines 1-6 by disclosing the CPU that allocates servicing time.

However, Kilkki et al discloses:

establishing a pricing tier for each request generating device, (Col. 5, lines 15-16, [charging based on NBR value represents pricing tier]). Kilkki et al discloses this limitation in an analogous art for the purpose of showing that charges are implemented based on the transmission rate of data.

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to establish a pricing tier for each request generating device with the motivation of determining an amount to charge based on a time factor.

As per claims 3, 12, Freeland et al discloses:

wherein the request generating device is a computer, (col. 1, lines 65-68, and Col. 4, lines 8-11, processing unit is the computer).

As per claims 4, 13, Freeland et al discloses:

wherein the request servicing device is an electronic data storage device, (col. 1, lines 65-68, and Col. 4, lines 8-11, processing unit is the electronic data storage device w/ col. 3, lines 9-17, shows processing units have storage means).

As per claims 5, 14, both Freeland et al and Kilkki et al fail to disclose:

wherein the electronic data storage device is a disk array.

Official notice is taken that it is old and well known in the computer art for an electronic data storage device to be a disk array. It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention for the electronic data storage device to be a disk array with the motivation of having reliable and easily accessible means for retrieving stored data.

As per claim 6, Freeland et al discloses:

wherein the maximum rate of request servicing is established via specification of a maximum rate of request servicing by the request generating device, (Col. 4, lines 31-33, using the maximum number of elemental tasks at the present enablement time to determine the task control word that corresponds to increasingly time consumptive processing, this is defined and controlled by CPU execution).

6. Claims 7, 8, 16, 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Freeland et al (US 4,262,331), and further in view of Kilkki et al (US 6,011,778), and further in view of Storch et al (5,920,846).

As per claim 7, 16, neither Freeland et al nor Kilkki et al disclose wherein the maximum rate of request servicing is established by partitioning the capacity of the request servicing device among the request generating devices in order to provide, when possible, each request generating device with a maximum rate of request servicing specified by the request generating device, and otherwise to provide each request generating device with a maximum rate of request servicing proportional to a maximum rate of request servicing specified by the request generating device, but Freeland et al does disclose a request servicing device in the abstract, lines 1-6 by disclosing the CPU that allocates servicing time.

However Storch et al discloses:

wherein the maximum rate of request servicing is established by partitioning the capacity of the request servicing device among the request generating devices in order to provide, when possible, each request generating device with a maximum rate of

request servicing specified by the request generating device, and otherwise to provide each request generating device with a maximum rate of request servicing proportional to a maximum rate of request servicing specified by the request generating device, (Col. 58, line 59-Col. 60, line 2, [time intervals being divided]). Storch et al discloses this limitation in an analogous art for the purpose of showing that the time that service requests are processed can be distributed accordingly.

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to partition the capacity of the request servicing device with the motivation of making it easier to service the requests in a shorter period of time.

As per claim 8, 17, neither Freeland et al nor Kilkki et al disclose wherein the request servicing device may dynamically alter the maximum rate of request servicing provided to one or more request generating devices in accordance with a rate at which the request servicing device receives requests and according to the request servicing capacity of the request serving device, but does disclose a request servicing device in the abstract, lines 1-6 by disclosing the CPU that allocates servicing time.

However Storch et al discloses:

wherein the request servicing device may dynamically alter the maximum rate of request servicing provided to one or more request generating devices in accordance with a rate at which the request servicing device receives requests and according to the request servicing capacity of the request serving device, (Col. 59, lines 2-9, [overriding]).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to alter the maximum rate of request servicing provided with the motivation of adjusting rate request data in order to allow the requests to conveniently get serviced in an appropriate amount of time.

Allowable Subject Matter

7. Claims 2, 9, 11, 18, 19 and 20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Akiba K Robinson-Boyce whose telephone number is 703-305-1340. The examiner can normally be reached on Monday-Tuesday 8:30am-5pm, and Wednesday, 8:30 am-12:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tariq Hafiz can be reached on 703-305-9643. The fax phone numbers for the organization where this application or proceeding is assigned are 703-746-7238 [After final communications, labeled "Box AF"], 703-746-7239 [Official Communications], and 703-746-7150 [Informal/Draft Communications, labeled "PROPOSED" or "DRAFT"].

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

A. R. B.
February 16, 2005

TARIQ R. HAFIZ
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600